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ABSTRACT

This report examines cooperative learning in the Central Elementary School, a special demonstration school in a cooperative project between the Snohomish, Washington School District and Western Washington State University. After reporting the research findings on cooperative learning approaches identified in "Effective Schooling Practices: A Research Synthesis," the report describes the Central Elementary School and its teacher training in the cooperative learning approach. To illustrate the Central approach, three classroom situations are presented: (1) a sixth grade music lesson; (2) a cooperative learning exercise to practice using pictographs in sentences for a mixed group of first and second graders; and (3) a cooperative learning lesson to increase questioning and problem-solving skills in a class of advanced placement students from grades four, five, and six. (MM)

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Effective Practices in Place: Snapshot #7

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Cooperative Learning: Central Elementary School

Jocelyn A. Butler

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Research Findings

Research supports the use of cooperative learning approaches in the classroom. As identified in *Effective Schooling Practices: A Research Synthesis* (Northwest Regional Educational Laboratory, 1984), those findings include:

At the **classroom** level:

1.1 Instruction is guided by a preplanned curriculum.

- Resources and teaching activities are reviewed for content and appropriateness and are modified according to experience to increase their effectiveness in helping students learn.

1.2 There are high expectations for student learning.

1.3 Students are carefully oriented to lessons.

- Teachers help students get ready to learn. They explain lesson objectives in simple, everyday language and refer to them throughout lessons to maintain focus.

1.4 Instruction is clear and focused.

- Students have plenty of opportunity for guided and independent practice with new concepts and skills.
- Teachers select problems and other academic tasks that are well matched to lesson content so student success rate is high. Seatwork assignments also provide variety and challenge.

1.5 Learning progress is monitored closely.

- Teachers require that students be accountable for their academic work.

1.6 Instructional groups formed in the classroom fit instructional needs.

- When introducing new concepts and skills, whole-group instruction, actively led by the teacher, is preferable.
- Smaller groups are formed within the classroom as needed to make sure all students learn thoroughly. Students are placed according to individual achievement levels; underplacement is avoided.
- Teachers review and adjust groups often, moving students when achievement levels change.

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Situation

Central Elementary School was created in 1985 as a special demonstration school in a cooperative project between the Snohomish, Washington School District and Western Washington State University. The impetus for the project was the district Board of Education's decision to focus on improving student learning in the area of higher-order thinking. Since it opened, a cooperative learning approach has been applied throughout the school, the result of a Board resolution identifying cooperative learning as a main district priority.

There are 6,000 students in the Snohomish public schools, which include seven elementary schools, two junior high schools, and one high school. Five of the seven elementaries are Chapter 1 schools. Historically an agricultural community, the district is in transition as increased numbers of professionals working in nearby Seattle move into the area.

While smaller than other elementary schools in the district, the Central population of 284 students, grades K-6, is typical. There are fewer than one percent minority students, and Central is a Chapter 1 school with 23 percent of students involved in the free and reduced lunch program.

Context

For approximately 11 years, Snohomish School District teachers have been involved in staff development focused on Madeline Hunter's approach to improving instruction. The staff members who comprise the Central faculty have, in addition, all undergone extensive training in the Johnsons' cooperative learning approach.

In the Johnsons' model, there are 18 elements of structuring cooperative learning situations effectively:

1. Specifying instructional objectives
2. Deciding on the size of the group
3. Assigning students to groups
4. Arranging the room
5. Planning the instructional materials to promote interdependence
6. Assigning roles to ensure interdependence
7. Explaining the academic task
8. Structuring positive goal interdependence
9. Structuring individual accountability
10. Structuring intergroup cooperation
11. Explaining criteria for success
12. Specifying desired behaviors
13. Monitoring students' behavior
14. Providing task assistance
15. Intervening to teach collabortive skills
16. Providing closure to the lesson
17. Evaluating the quantity and quality of students' learning
18. Assessing how well the group functioned

(See David W. Johnson, et al., *Circles Of Learning*. Alexandria, VA: Association for Supervision and Curriculum Development, 1984.)

All Central staff have been trained in the model, and the school is in its second year of implementing cooperative learning schoolwide. Implementation has been supported by the district, and the school has served as a model to the rest of the district with one day per month set aside for visitation and observation by teachers from other schools. Central staff members meet weekly in 45-minute staff meetings with timed agendas to discuss progress and solve problems. In addition, the staff gathers for a four-hour work session once a month to study research and identify problem areas in the school.

Staff members are organized into groups to facilitate implementation. The principal randomly gives teachers year-long assignments to four-member "base groups" for support, celebration and problem solving. In "work groups," on the other hand, pairs of teachers share preparation periods to plan instruction, individually teach lessons, debrief their experiences, co-teach occasionally, and eventually observe one another. Short-term informal groups are also formed for special projects or specific activities. For further information on the Central approach, contact Nancy Whitson, Principal, Central Elementary School, 221 Union Avenue, Snohomish, Washington 98290 (206/568-0682).

Example: Music Lesson, Grade Six

All students in the school report to a portable classroom for a one-half hour music class twice a week. This cooperative lesson involves 24 sixth grade students. As students enter the classroom, they pick up sheets of printed song lyrics, go to preassigned seats, and begin to sing along as the teacher plays the piano.

After the class settles in and completes the singing part of the class, the teacher announces the main activity for the day: Students in pairs will work together to learn to play a new song on xylophone-like instruments. Instruments are already in place in a semicircle on one side of the room.

First, students will work together to name the notes of the new song and write the names down on a worksheet. Then each will be assigned one portion of the notes on the scale, and each will be responsible for playing those notes in rhythm as the pair learns to play the song.

The teacher reviews the names of the notes on the blackboard in preparation for the students' work, and students number off into pairs and are assigned to instruments. They quickly move to their positions, and each pair chooses a recorder. The recorder goes to the front of the room to pick up the worksheet, one per pair.

Students fill out the worksheets together and both sign their names. The teacher goes around the room and checks the work for all pairs to be sure they have named the notes correctly. Pairs decide which notes each will play and begin to work out the song ("Twinkle, Twinkle Little Star"). After 10 minutes, the teacher selects one pair to demonstrate the song, then leads all pairs together through the song.

Once the exercise is completed, the teacher debriefs the exercise, noting ways in which students excelled at working together. Each pair of students then shares with their partners one thing they did that helped their partner and one that both could work on to improve. The full group then shares suggestions about what to do better next time.

Example: Grades One and Two

A three-teacher team is responsible for a mixed group of 34 first graders and 48 second graders. They share a large room (two converted classrooms) which has four main areas: three teaching stations with seats at tables for individual students where much instruction takes place, and an open, carpeted area for special activities. This lesson is a full-group cooperative learning exercise to practice using pictographs in sentences.

As the sequence begins, all 82 students are at their assigned home desks in one of the three teaching areas, heads resting on arms on desks. As groups are called, the children move quietly and in an orderly manner to "the rug" and seat themselves facing front. Transition to this area takes about four minutes.

In the following half hour in this arrangement, the students work with the teacher leading this lesson while the two other teachers observe. Lesson content includes:

- Review of a previous communications lesson in which the concept of pictographs (pictures representing words or concepts, e.g., "man," "woman," "peace," etc.) was introduced.
- Review of a previous history lesson about the Mayflower Pilgrims and their sharing Thanksgiving with the American Indians
- Introduction of 18 new pictographs with explanations and the teacher's writing of their names beneath them.
- The reading through of demonstration sentences prepared earlier by the teacher to show how pictographs and words can be used together to make sentences.

Throughout this lesson, students are involved through a variety of questioning techniques to assure all understand the pictographs.

The teacher leading the lesson then describes the cooperative learning assignment: Students will work with preassigned partners to make up three sentences using at least one pictograph in each sentence. Copies of the 18 pictographs and paper to use in the assign-

ment have been prepared. Pairs of students who finish early are to use any remaining time to draw a picture of the Mayflower on the back of their lesson worksheet.

Students are reminded that this activity will require two cooperative skills which they already have. They are reminded that they will use "twelve-inch voices" as they work together, speaking softly so they can only be heard a foot away. They also are reminded to make an effort to use "nonverbal put-ups," (praise or encouragement that is the opposite of a "put-down": a smile, applause, a pat on the back). The teacher says she will be circulating to watch for these behaviors, and the goal is for the names of everyone in the class to be placed on her list of those who are using these cooperative skills.

The students quickly and quietly return to their home areas. The teacher then asks that students take a moment to remember who their partners are and lists of partners are, posted in each of the three teaching areas. Students who are on the left side of the list of pairings are told to bring a pencil, crayons and eraser to the assigned spot in the room; those on the right side of the page will retrieve the worksheet for their pairs from the teacher in the center of the room. The students are then released to find their partners and their space, bringing their required equipment. In the time it takes the teacher to count backward slowly from eight to one, all 82 students are paired, in place and at work on the task—some at desks, some on "the rug," some on the floor. As they complete the assignment, all three teachers circulate and have individuals read aloud the sentences they have been writing with their partners.

After the allotted 15 minutes for the practice, students are given directions to put both their names on the shared paper and to list the number of nonverbal put-ups on the sheet. They have one minute to finish these tasks.

They then are asked to take the papers and return to their regular assigned seats. The teacher then asks individual students to come to the front of the class and read their sentences. Papers are collected and later bound into a book so that all students' work is displayed to the full class.

Example: Problem Solving

A class of 29 advanced placement students from grades four, five and six are frequently involved in collaborative learning. This lesson is designed to increase their questioning and problem-solving skills.

The teacher announces the lesson as a review of math problems in the context of improving collaborative skills. Objectives are identified as increasing general problem-solving skills and students' involvement in thinking about thinking: In groups of three, students will take on roles either of analyzer/monitor (keeps the group on task and moves it toward reaching solutions to problems), recorder (writes down processes as group members solve the math problems together) or the questioner (formulates questions to guide the group toward task completion).

There is discussion about the types of questions and strategies necessary for the lesson. The teacher emphasizes that questions are for clarification or elaboration of the task. Student examples of questions include: "What do you mean by that?" "Can you tell me more?" "Would you please go a little farther with this?" The questions are to help the group understand the task and get the other people in the group to think in different ways about what must be done. While the groups are working, two student monitors will be circulating to record examples of good questioning techniques and thinking strategies.

The teacher announces the preassigned groups, and students move quickly into preassigned spaces around the room, sitting "knee to knee and eye to eye." Groups have been arranged so that there is a specific mix of students in each. The teacher then gives all nine groups role assignments: oldest student (sixth grader) is the analyzer/monitor; the youngest (fourth grader) is the recorder; the middle student (fifth grader) is the questioner. Two observing monitors are selected and their task explained while the rest of the class are rearranging themselves. The shift to groups and role assignment takes about four minutes.

The teacher hands out problem sheets and monitor sheets. Recorders in each group read aloud the first problem. Students are given four minutes to complete the first math problem, then there is a round of reports from all groups focusing on the process. After discussion of the answer to the problem, students discuss what they noticed about the process: what went well in the course of group problem solving and what they need to work on in terms of working in this type of group. The two roving monitors report they have recorded incidents of constructive disagreement, good involvement, and nonverbal praise. From initial announcement through debriefing, this activity takes one hour of class time.

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